

REMARKS

Claims 1, 4, 5, 7, 11-14, 16-19, 23-26, 30, and 31 are pending. Clarifying amendments are made in each of claims 1, 4, 5, 7, 11-14, 16-19, 23-26, and 30 to more clearly and better define Applicant's claimed apparatus and method. No new matter is added by the clarifying amendments, as there is full support for the amendments in the specification and drawings. See at least page 4, lines 29-34; page 7, lines 25-35; page 9, lines 4-30; page 10, line 34 to page 12, line 14; the Abstract; and Figure 1. Consideration and allowance of the claims, as amended, are requested for the reasons discussed below.

The Objections

The Examiner objected to claims 1, 4, 5, 7, 11-14, 16-19, 23-26, 30, and 31 because of certain formalities. Applicant has amended the claims by making appropriate corrections to address the objections and clarify the claims. Applicant also has made some additional clarifying amendments in the pending claims as set forth in the listing of claims on pages 2-6 herein.

The §102 Rejection

The Examiner rejected claims 1, 7, 11, 13, 14, 19, 23-25, 30, and 31 under §102 as being anticipated by Grenier (U.S. Pat. No. 5,412,954). The Examiner's reasons in support of this rejection are set forth on pages 2-4 of the Office Action.

The apparatus disclosed in Grenier is significantly different than Applicant's apparatus as claimed in amended independent claim 1. For the reasons previously discussed on pages 8-9 of the Amendment filed on May 19, 2009 (which reasons are incorporated herein by reference)

and for the additional reasons discussed herein, independent claim 1, as amended, is not anticipated by Grenier and should be allowed.

In support of his rejection of independent claim 1 (and dependent claims 19, 23-25, 30, and 31) the Examiner essentially repeated his position stated in the previous Office Action, and then added:

Grenier further teaches constructing the apparatus (column 1, lines 52-55; column 3, line 65-column 4, line 8) and transporting the assembled unit to the site for cryogenic air separation (column 1, lines 53-54; column 1, line 8, 35). (Emphasis added).

Applicant respectfully disagrees, as Grenier does not teach transporting the assembled unit to the site for cryogenic air separation. To the contrary, Grenier “teaches away” from transporting a fully assembled unit or single pre-assembled unit to the site for cryogenic air separation for erection as a single pre-assembled unit at the site, as in Applicant’s claimed apparatus. Support for this “teaching away” from Applicant’s claimed apparatus of independent claim 1 is provided in several passages of Grenier’s disclosure, including a passage cited by the Examiner – column 1, lines 8-35.

The first paragraph of the passage at column 1, lines 8-35 simply describes the “Field of the Invention” for Grenier’s invention. The portion of the passage at lines 13-35 in column 1 is part of the “Description of Prior Art,” which is discussed fully at column 1, lines 13-50. Included therein is a discussion of the limitations of the prior art, including “a limitation on the sizes of the apparatuses which can be disposed in the sheath yet still permit easy transportability.” See column 1, lines 20-35, and especially lines 33-35.

Contrary to the Examiner’s suggestion, the passage in Grenier at column 1, lines 8-35 does not support the Examiner’s position that Grenier teaches “transporting the assembled unit to

the site for cryogenic air separation.” Rather, that passage simply provides a brief description of the prior art, and concludes that there is a limitation on the sizes of the apparatuses which can be disposed in the sheath yet still permit easy transportability. In addition, while the “Description of Prior Art” section of Grenier refers to “easy transportability” and “easy transportation,” it does not refer to transportation of a single pre-assembled unit such as Applicant’s claimed apparatus (a fully assembled unit) for cryogenic distillation of air in amended independent claim 1. Rather, that passage in Grenier only discusses a component(s) of such a unit – “apparatuses which can be disposed in the sheath” (the sheath being only a part of Grenier’s “Apparatus for Cryogenic Treatment, Such as Air Distillation”).

Further support for the “teaching away” of Grenier with respect to a fully assembled unit adapted to be transported from one location to another location a substantial distance away as a single pre-assembled unit adapted to be erected at a site for a cryogenic air separation plant, is set forth in column 3, lines 46-53:

With this mode of insulation, the sheath under vacuum may have a diameter which is closely adapted to the exterior diameter of the double column, which may have a constant diameter along its entire height, which enables to provide a double column 1-sheath 15 assembly conveniently transportable, for substantial column diameters, corresponding to productions of oxygen which may reach up to about 1000 tons/day. (Emphasis added).

As noted in the above-quoted passage, the double column 1-sheath 15 assembly is transported as one separate unit. This implies that the other components, such as main cold box 19 and cold connection box 20, are transported separately from the “double column 1-sheath 15 assembly.” Therefore, the apparatus of Grenier is not transported from one location to another

location a substantial distance away as a single pre-assembled unit adapted to be erected at a site for a cryogenic air separation plant.

The above-quoted passage states only that the “double column 1-sheath 15 assembly” is transportable as one separate unit. Nowhere in the disclosure of Grenier does it state that cold box 19 and cold connection box 20 are to be transported together with the “double column 1-sheath 15 assembly” as a single pre-assembled unit. In fact, the emphasized language in the above-quoted passage (column 3, lines 46-53) suggests that cold box 19 and cold connection box 20 are not transported with the “double column 1-sheath 15 assembly” all together as a single pre-assembled unit.

In the “Response to Arguments” section on page 8 of the Office Action dated August 19, 2009, the Examiner set forth the reasons why he did not find persuasive Applicant’s arguments set forth in the Amendment dated May 19, 2009. Paragraph 3 on page 8 of the Office Action refers to Applicant’s arguments (page 9, ¶2) asserting that the components of Grenier are transported separately and not from one location to another as a single unit suitable for erection at a site. The Examiner stated:

In response to the applicant’s arguments, the examiner fully disagrees as a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The apparatus is fully capable of being used and transported as claimed. It is further noted that Grenier explicitly teaches the apparatus to be “easily transportable” (column 1, lines 49-50). Therefore, the allegation is unpersuasive. (Emphasis added).

As discussed on pages 8-10 herein, Grenier does not teach easy transportation of the entire apparatus (fully assembled unit) for cryogenic treatment, such as air distillation, in a single

pre-assembled unit. In fact, as discussed above, Grenier actually “teaches away” from that feature of Applicant’s apparatus for cryogenic distillation of air, as claimed in amended independent claim 1.

Therefore, Grenier does not teach or disclose at least the following limitation of amended independent claim 1:

wherein said fully assembled unit is adapted to be transported as a single pre-assembled unit from a first location to a second location at a substantial distance from the first location and the single pre-assembled unit is adapted to be erected at a site for a cryogenic air separation plant.

The complete apparatus of Grenier is not adapted to (or designed to) be transported as a single pre-assembled unit, nor is it adapted to (or designed to) be erected as a single pre-assembled unit. Accordingly, there are structural differences between the apparatus of Grenier and Applicant’s apparatus as claimed in amended independent claim 1. See, *In re Venezia*, 530 F.2d 956, 959, 189 USPQ 149, 152 (CCPA 1976) (limitation “adapted to be positioned” served to precisely define present structural attributes of interrelated component parts of claimed assembly), cited in MPEP 2173.05(g).

In addition, each of the modules of Grenier are not attached directly to an adjacent module by direct contact or by a contacting means, as in Applicant’s claimed apparatus of independent claim 1. Therefore, there are multiple structural differences between Applicant’s claimed apparatus and the apparatus disclosed in Grenier.

Accordingly, since Grenier does not teach or disclose each and every limitation and element of Applicant’s apparatus as claimed in amended independent claim 1, the subject matter of said claim is novel and claim 1, as amended, should be allowed.

The dependent claims (claims 7, 11, 13, 14, 19, 23-25, 30, and 31) which depend from amended independent claim 1 also are not anticipated by Grenier because said dependent claims also include the limitations and elements of amended claim 1 (as arranged in claim 1), which are not taught or disclosed by Grenier. Accordingly, dependent claims 7, 11, 13, 14, 19, 23-25, 30, and 31, as amended, also are novel and should be allowed.

The §103 Rejections

The Examiner rejected dependent apparatus claims 4 and 5 under §103 as being unpatentable over Grenier in view of Bracque et al. (U.S. Pat. No. 5,349,827). For the reasons discussed below, Applicant's apparatus claimed in dependent apparatus claims 4 and 5, as amended, is not obvious in view of the cited references.

In support of the rejection of dependent apparatus claims 4 and 5, the Examiner stated: "Grenier teaches all of the claim limitations of claims 4-5, but does not explicitly teach that the diameter of the column (1B) is over 3.5 meters or about 5 or 6 meters (16-19 feet)." (Emphasis added). The Examiner then explained how, according to his position, said missing teaching (column diameter size) would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made in view of distillation columns having diameters of about 5 meters as taught by Bracque (827).

However, Grenier does not teach all of the other claim limitations of amended dependent apparatus claims 4 and 5. As discussed above, with respect to the §102 rejection, Grenier does not teach or disclose several limitations of independent apparatus claim 1, as amended. Bracque (827) does not cure the deficiencies of Grenier, since Bracque (827) also does not teach or disclose all of the limitations in claim 1, as amended, which are not disclosed by Grenier.

Accordingly, dependent apparatus claims 4 and 5, as amended, (which claims depend from amended independent claim 1) are not obvious in view of the combination of Grenier with Bracque (827).

For similar reasons, dependent claims 12, 16-18, and 25-26, as amended, also are not obvious in view of the combination of Grenier with the other references cited by the Examiner. These reasons are discussed below with respect to each of the specific rejections.

The Examiner rejected dependent apparatus claim 12, which depends from independent claim 1 (as dependent claim 11, from which claim 12 depends, depends from claim 1), as being unpatentable over Grenier in view of Zarate et al. (U.S. Pat. No. 4,957,523). For the reasons discussed below, Applicant's apparatus claimed in dependent apparatus claim 12 is not obvious in view of the cited references.

In support of the rejection of dependent apparatus claim 12, the Examiner stated: "Grenier teaches all of the limitations of claim 12 but does not explicitly teach that the air purification unit (4) comprises at least two air purification vessels arranged in parallel, each vessel comprising at least one bed of carbon dioxide and/or water adsorbent material." (Emphasis added). The Examiner then explained how, according to his position, said missing teaching (purification system) would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made in view of the air purification system taught by Zarate.

However, Grenier does not teach all of the other claim limitations of dependent apparatus claim 12. As discussed above, with respect to the §102 rejection, Grenier does not teach or disclose several of the limitations of independent apparatus claim 1, as amended. Zarate does not cure the deficiencies of Grenier, since Zarate also does not teach or disclose all

of the limitations of independent claim 1, as amended, which are not disclosed by Grenier. Accordingly, dependent apparatus claim 12 (which depends from independent claim 1) is not obvious in view of the combination of Grenier with Zarate.

The Examiner rejected dependent apparatus claims 16-18 and dependent method claims 25-26 as being unpatentable over Grenier in view of Bracque et al. (U.S. Pat. No. 5,461,871). For the reasons discussed below, Applicant's apparatus and method claimed in dependent apparatus claims 16-18 and dependent method claims 25-26, as amended, are not obvious in view of the cited references.

In support of the rejection of dependent apparatus claims 16-18, the Examiner stated: "Grenier teaches all of the limitations of claims 16-18 but does not explicitly teach that the at least one further processing unit (3, 4, 5, 6) is provided within at least one further processing unit module." (Emphasis added). The Examiner then explained how, according to his position, said missing teaching (providing a processing unit within a module) would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made in view of the teachings of Bracque (871).

In further support of the rejection of dependant apparatus claims 16-18, the Examiner stated that Bracque (871) teaches a framework of supporting members and panels provided between adjacent support members forming at least one enclosure within the framework within which is provided the or at least one further processing unit. The Examiner then took the position that it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine the system of Grenier as discussed with the framework of

Bracque (871) for the purpose of improving the simplicity of construction and of reducing the number of parts that need to be custom installed at the site.

However, Grenier does not teach all of the other claim limitations of dependent apparatus claims 16-18. As discussed above, with respect to the §102 rejection, Grenier does not teach or disclose several of the limitations of the apparatus of independent claim 1, as amended. Bracque (871) does not cure the deficiencies of Grenier, since Bracque (871) also does not teach or disclose all of the limitations of independent claim 1, as amended, which are not disclosed by Grenier. Accordingly, dependent apparatus claims 16-18 (which depend from independent claim 1) are not obvious in view of the combination of Grenier and Bracque (871).¹

In support of the rejection of dependent method claims 25-26, the Examiner stated: "Grenier and Bracque (871) teach all of the limitations but do not explicitly teach that construction takes place at a dockside or a construction facility with access to a dockside for transportation by sea." (Emphasis added). The Examiner then explained how, according to his position, said missing teaching (providing an assembled unit from a construction site with access to a dockside) would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made.

¹ Applicant notes that the language in Bracque (871) at column 1, lines 11-18 suggests that this reference also "teaches away" from Applicant's claimed apparatus of amended independent claim 1. Specifically, the first sentence of that passage states: "It has been proposed to preassemble in the factory all of the installation, except the air compressor group and the cylinders for the purification of air by adsorption." (Emphasis added). This statement makes clear that the apparatus disclosed by Bracque (871) does not teach or disclose a fully assembled unit adapted to be transported as a single pre-assembled unit, which is adapted to be erected at a site for cryogenic air separation plant. Accordingly, a person skilled in the art would not combine this reference with Grenier, which also teaches away from Applicant's claimed apparatus, as discussed on pages 8-10 herein.

However, for the reasons previously discussed above, Grenier and Bracque (871) do not teach all of the other limitations of dependent method claims 25-26. As discussed above, with respect to the §102 rejection independent of claim 1 and with respect to the §103 rejection of dependent claims 16-18, Grenier and Bracque (871) do not teach all of the limitations of the apparatus of independent claim 1, as amended, and of amended dependent claims 16-18. Accordingly, dependent method claims 25-26 (which depend from independent claim 1) are not obvious in view of the combination of Grenier and Bracque (871).

Moreover, the Examiner did not reject independent apparatus claim 1 as being obvious under §103; and independent apparatus claim 1, as amended, is not obvious in view of Grenier, which does not teach or disclose all of the limitations and elements of amended claim 1². Since independent apparatus claim 1, as amended, is non-obvious under §103, all of the dependent claims (including dependent claims 4, 5, 12, 16-18, and 25-26) which depend from independent apparatus claim 1, as amended, also are non-obvious. *In re Fine*, 837 F.2d 1071, 1076, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988).

Accordingly, for all of the above reasons, dependent claims 4, 5, 12, 16-18, and 25-26 are non-obvious and should be allowed.

CONCLUSION

Applicant believes that the foregoing constitutes a complete and full response to the final Office Action dated August 19, 2009 and the Advisory Action dated October 20, 2009. In view

² To establish a *prima facie* case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (C.C.P.A. 1974).

Application No. 10/550,569
Amendment
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of the amendments and the remarks above, the present application is in condition for allowance and a Notice to that effect is respectfully solicited.

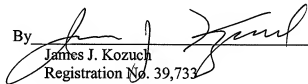
Should the Examiner deem that any action on the part of Applicant would advance prosecution, the Examiner is invited to telephone Applicant's attorney.

REQUEST FOR EXAMINER INTERVIEW

Applicant requests that the Examiner notify the undersigned attorney when the Examiner takes up this case for further review and examination. If the Examiner does not find the above remarks persuasive and if the present Amendment does not put the application in condition for allowance, Applicant respectfully requests an interview with the Examiner and the Examiner's Supervisor before the next Office Action on the merits. Therefore, if the Examiner intends to issue an Office Action rejecting the claims, as amended herein, it is respectfully requested that the Examiner first call the undersigned attorney prior to issuing such an Office Action so that an interview can be arranged to expedite the prosecution of this application.

October 27, 2009

By



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